

# TMJ Disorder — Diagnosis and Surgical Treatment

Canonical: <https://directory.collinsstreetspecialistcentre.com.au/procedures/oral-maxillofacial-surgery/tmj-disorder-diagnosis-and-surgical-treatment/>

## Description:

--- title: "TMJ Disorder — Diagnosis and Surgical Treatment" slug: /oral-maxillofacial-surgery/tmj-surgery/ type: procedure speciality: oral-maxillofacial-surgery specialists: ["A/Prof Patrishia Bordbar...]

## Details:

--- title: "TMJ Disorder — Diagnosis and Surgical Treatment" slug: /oral-maxillofacial-surgery/tmj-surgery/ type: procedure speciality: oral-maxillofacial-surgery specialists: ["A/Prof Patrishia Bordbar", "Dr Ricky Kumar"] related: - /oral-maxillofacial-surgery/orthognathic-surgery/ - /oral-maxillofacial-surgery/ - /orthodontics/ seo\_target: "TMJ jaw joint surgery specialist Melbourne CBD" ---

# TMJ Disorder — Diagnosis and Surgical Treatment

## What Is the Temporomandibular Joint?

The temporomandibular joint (TMJ) is the bilateral hinge and sliding joint connecting the lower jaw (mandible) to the base of the skull (temporal bone), located just in front of each ear. It is one of the most anatomically complex joints in the human body, combining rotational and translational movement to allow the wide range of jaw motion required for chewing, speaking, and swallowing.

Between the bony surfaces of the joint sits an articular disc — a fibrocartilaginous cushion that distributes load and ensures smooth movement. A network of muscles, ligaments, and a joint capsule maintains the joint's position and stability. When any component of this system is disrupted — the disc, the bone, the muscles, or the capsule — the result is a temporomandibular disorder (TMD).

TMD is a broad clinical category encompassing conditions ranging from muscular pain and minor disc displacement to degenerative joint disease, ankylosis, and condylar resorption. The presentation varies widely: some patients experience intermittent clicking with no pain or functional impairment; others experience severe, chronic jaw pain, restricted opening, headaches, and progressive structural change within the joint. Treatment must be matched carefully to the diagnosis.

---

## When Might You Need Assessment or Treatment?

Signs and symptoms that warrant TMJ evaluation include:

- **Jaw pain or facial pain** that worsens with chewing, yawning, or prolonged talking - **Clicking, popping, or grating sounds** from one or both jaw joints - **Limited mouth opening** — difficulty opening the mouth fully, or the jaw deviating to one side on opening - **Jaw locking** — the jaw becoming stuck in an open or closed position - **Ear pain, tinnitus, or a sensation of fullness** in the ear without primary ear pathology - **Headaches** — particularly temporal or pre-auricular headaches associated with jaw muscle activity - **Bite changes** — a perceived shift in how the teeth meet, often

indicating joint or condylar changes - **Chronic bruxism or clenching** with pain and muscular hypertrophy - **Prior jaw trauma** with persistent joint symptoms - **Condylar resorption** — progressive loss of the condylar head, typically in young women, leading to skeletal change and bite deterioration

Most patients with TMD symptoms are managed conservatively without surgery. Surgery is considered only when structural joint pathology is confirmed, conservative management has been appropriately exhausted, and the anticipated benefit clearly outweighs the procedural risk.

---

## ## What to Expect — Step by Step

### ### Phase 1: Diagnosis and Conservative Management

**Clinical Assessment** Evaluation begins with a detailed history of symptoms — onset, duration, aggravating and relieving factors, prior treatment, and any history of jaw trauma or systemic arthropathy. Clinical examination assesses mouth opening range, joint sounds, joint and muscle tenderness, and the occlusion.

**Imaging** TMJ diagnosis is multi-modal. Cone beam CT (CBCT) using the Planmeca ProMax 3D Max provides high-resolution bony detail of the condyle, glenoid fossa, and joint space, identifying degenerative change, erosion, osteophytes, or bony irregularity. Magnetic resonance imaging (MRI) — which may be requested through an imaging service — is the gold standard for disc position and morphology assessment, identifying disc displacement with or without reduction, effusion, and retrodiscal tissue changes.

**Conservative Treatment Measures** The majority of TMD patients — including those with disc displacement, muscle pain, and mild degenerative change — achieve satisfactory management through non-surgical means:

- **Occlusal splint therapy** — a custom-fabricated hard acrylic or soft appliance worn over the teeth to reduce loading on the joint, interrupt parafunctional habits, and allow muscle decompression. Splints are the cornerstone of TMD management and are constructed in collaboration with the treating dentist or prosthodontist. - **Physiotherapy** — targeted exercises, manual therapy, and postural correction to address muscular contributions to joint loading - **Anti-inflammatory pharmacology** — NSAIDs, muscle relaxants, or short-term corticosteroid therapy where indicated - **Intra-articular injections** — corticosteroid or hyaluronic acid injections under imaging guidance for acute inflammatory episodes - **Behaviour modification** — jaw rest, diet modification, and habit correction (jaw clenching, bruxism, nail-biting, chewing postures)

### ### Phase 2: Minimally Invasive Surgical Intervention

When conservative management fails to resolve symptoms and structural joint pathology is confirmed, minimally invasive surgical options are considered first:

**Arthrocentesis** Arthrocentesis involves lavage of the joint space with saline solution through two small-gauge needles inserted into the joint under local anaesthesia. It is an office-based procedure performed to remove inflammatory mediators, break adhesions, and restore disc mobility. Recovery is rapid; it is often the first surgical intervention trialled when the joint is acutely locked or when conservative splinting has not provided adequate relief.

**Arthroscopy** Arthroscopic surgery involves insertion of a small fibre-optic camera (arthroscope) and instruments through puncture incisions into the joint space. Under direct arthroscopic vision, the surgeon can lavage the joint, lyse adhesions, reposition the disc, smooth irregular bony surfaces (eminoplasty), or biopsy tissue. Arthroscopy offers superior diagnostic and therapeutic capability to arthrocentesis while remaining far less invasive than open joint surgery. Recovery typically involves a

few days of soft diet and joint rest.

### ### Phase 3: Open Joint Surgery

Open joint surgery (open arthroplasty) is reserved for cases where pathology cannot be adequately addressed arthroscopically:

**\*\*Disc Repair or Repositioning\*\*** Where the articular disc is displaced but structurally intact, open surgery allows direct disc reposition and stabilisation using sutures to the surrounding ligament and capsule.

**\*\*Discectomy\*\*** In cases where the disc is severely degenerated, perforated, or non-salvageable, the disc may be removed. Whether to reconstruct with an autogenous graft (dermis or temporalis fascia) or proceed without a replacement depends on the severity of degenerative change and patient factors.

**\*\*Total Joint Replacement\*\*** For end-stage joint disease — severe bilateral degenerative arthritis, bony ankylosis, or failed prior surgery — total alloplastic joint replacement with custom titanium-and-polyethylene prostheses provides highly predictable functional restoration. These custom devices are designed from the patient's CT scan geometry. Recovery involves a phased return to function over several months.

---

### ## Recovery and Aftercare

Recovery depends significantly on the procedure performed: - **\*\*Arthrocentesis:\*\*** Return to normal diet within 24–48 hours in most cases; mild discomfort only - **\*\*Arthroscopy:\*\*** Soft diet for 1–2 weeks; full activity generally resumed within 2 weeks - **\*\*Open arthroplasty / joint replacement:\*\*** Hospital admission; soft diet for 4–6 weeks; physiotherapy essential to restore range of motion; full functional recovery over 3–6 months

---

### ## Why See an Oral & Maxillofacial Surgeon?

TMJ disorders span the boundary between dentistry, medicine, surgery, and physiotherapy. No single profession treats the full spectrum, but when structural pathology is confirmed and surgical intervention is warranted, the oral and maxillofacial surgeon is the only specialist trained to perform the full range of TMJ procedures — from arthrocentesis through to total joint replacement — within a medical-surgical framework.

Oral and maxillofacial surgeons complete 15–17 years of training including both a dental and a medical degree, equipping them to interpret TMJ pathology in the context of systemic arthritides, connective tissue disorders, and medication effects; to co-manage patients with rheumatologists and physiotherapists; and to perform joint surgery in a hospital environment under general anaesthesia when required.

At Collins Street Specialist Centre, the OMS team draws on in-house 3D imaging technology and works closely with orthodontic and prosthodontic colleagues in the same building to ensure TMD management is appropriately integrated with occlusal and bite considerations.

---

### ## Our Specialists

**\*\*A/Prof Patrishia Bordbar\*\*** — Specialist Oral & Craniomaxillofacial Surgeon. BDS, MBBS (Hons), MDSc (OMS), FRACDS (OMS), FRCS (Edinburgh). Clinical A/Professor, University of Melbourne. Past President ANZAOMS. Chair, AOMI Board Oceania. Consultant Surgeon at the Royal Children's Hospital and Western Hospital Melbourne. Extensive experience across the spectrum of TMJ diagnosis

and surgical management.

**Dr Ricky Kumar** — Specialist Oral & Maxillofacial Surgeon. BHB, MBChB, BDS, FRACDS (OMS). Fellowship training at the Royal Children's Hospital Melbourne and Oxford University Hospitals. TMJ disorder is a noted sub-specialty interest. \*Please confirm Dr Kumar's availability at the time of booking.\*

Our OMS team consults from **Level 12 & Tower, Manchester Unity Building, 220 Collins Street, Melbourne CBD**.

---

## ## Related Treatments

- **Orthognathic Surgery**(/oral-maxillofacial-surgery/orthognathic-surgery/) — Jaw repositioning surgery that may be required when TMD coexists with significant skeletal jaw discrepancy - **Oral & Maxillofacial Surgery Hub**(/oral-maxillofacial-surgery/) — Overview of OMS procedures at CSSC - **Orthodontics**(/orthodontics/) — Orthodontic management of occlusal factors contributing to TMJ loading may be recommended as part of a multi-disciplinary TMD treatment plan